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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,792	02/14/2001	Keiji Sakata	36856.449	9594

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EXAMINER

NGUYEN, TUYEN T

ART UNIT	PAPER NUMBER
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2832

DATE MAILED: 12/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/782,792

Applicant(s)

SAKATA, KEIJI

Examiner

TUYEN T NGUYEN

Art Unit

2832

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meadors et al. [US 6,249,205] in view of Yamasawa et al. [US 6,140,902].

Meadors et al. discloses a multi-layer inductor [see previous office action].

Meadors et al. discloses the instant claimed invention except for each coil conductor pattern on the main surface of the plurality of the magnetic layers is in a range of about 35% to about 75% of the area of the main surface of the respective ones of the plurality of magnetic layers.

Yamasawa et al. discloses a multi-layer device comprising:

- a plurality of magnetic layers [3];
- a plurality of coil conductor patterns [6] formed between the plurality of magnetic layers;
- at least one nonmagnetic component [4] disposed in the vicinity of the plurality of coil conductor patterns in the plurality of magnetic layers.

wherein the coil conductor pattern on the main surface the plurality of the layers is in a range of about 35% to about 75% of the area of the main surface of the respective ones of the plurality of layers.

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It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use the coil conductor pattern design of Yamasawa et al. in Meadors et al. for the purpose of improving usage of the area of the conductive material and minimizing leakage inductance.

Regarding claim 5, the specific shape of the magnetic layers would have been an obvious design consideration based on the intended application use.

Regarding claim 7, Meadors et al. discloses an air gap [space] or cavity disposed inside one of the plurality of coil conductor patterns [figure 2]

Regarding claims 6, 8 and 9, Yamasawa et al. discloses the conductor patterns can be in any shape of meander and a combination of spiral [column 3, lines 40-44].

Regarding claim 10, Yamasawa et al. discloses the coil conductor patterns width can be in the range from 0.2mm to 1.0mm [column 9, lines 57-65]

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tuyen T. Nguyen whose telephone number is (703) 308-0821.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Elvin Enad, can be reached at (703) 308-7619. The fax number for this Group is (703)872-9306.

Any inquiry of a general nature or relating to status of this application of proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

TTN *TTN*

December 1, 2003

*Traylor* *Napier*